2/7/1 (Item 1 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

7707540 BIOSIS Number: 90075540
STUDY ON THE PROPAGATION OF DUCK AND GOSLING PLAGUE VIRUSES IN IDENTICAL HOST SYSTEM
HONG F; HUANG Y-X
SOUTH CHINA AGRIC. UNIV., GUANGZHOU.
VIROL SIN 5 (1). 1990. 102-106. CODEN: BIZAE
Full Journal Title: Virologica Sinica
Language: CHINESE
It is the first time in the present paper to report the propagation of duck plague virus (DPV-I) and gosling plague virus (GPV-I) in the identical duck embryo. What have been revealed in the results are as follows: 1. Both DPV and GPV particles were detected under electron microscope in the CAF of the duck embryos infected with DPV-I and GPV-I. 2. CAF with viruses could produce cytopathic effect (CPE) in the duck embryonic blast (DEF) cell monolayers, showing the existence of DPV; and GPV antigens were detected by micro-immune diffusion (MID) test for gosling plague. 3. The neutralization antibodies to both DPV/GPV and GPV-precipiting antibody were detected in the adult geese vaccinated with DPV/GPV, and 4. The vaccinated adult geese were resistant to the challenge with virulent DPV 16 days after vaccination. It has also been found that GPV-I could not be propagated solely or coinfected with DPV-I in the DEF cells.

2/7/2 (Item 2 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

6490170 BIOSIS Number: 85090691
DEVELOPMENTAL ORIGIN OF SEGMENTAL DIFFERENCES IN THE LEECH ECTODERM SURVIVAL AND DIFFERENTIATION OF THE DISTAL TUBULE CELL IS DETERMINED BY THE HOST SEGMENT
MARTINDALE M Q; SHANKLAND M
DEP. ANATOMY, HARVARD MED. SCH., 25 SHATTUCK ST., BOSTON, MASS. 02115.
DEV BIOL 125 (2). 1988. 290-300. CODEN: DEBIA
Full Journal Title: Developmental Biology
Language: ENGLISH
The body plan of the adult leech is metameric, with each hemisegmental complement of ectodermal and mesodermal tissues being produced from a set of seven serially repeated embryonic blast cells. Previous studies have shown that homologous o blast cells give rise to an almost identical complement of descendant cells in each of the 21 abdominal segments, but that one o blast cell derivative.sbd.the distalmost cell of the nephridial

tubule.sbd.is only present in 15 abdominal segments in the mature leech. Here we show that all o blast cells generate a presumptive distal tubule cell and that this cell migrates to its normal position in all abdominal segments. However, in segments which normally do not contain the mesodermal portion of the nephridium, the distal tubule cell dies before undergoing its terminal morphological differentiation. To ascertain whether the fate of the distal tubule cell is determined by its lineage history or by the segmental environment into which it is born, we utilized a previously described procedure for altering the segmental register between different embyronic cell lines. This procedure allowed us to effectively transplant o blast cells into more posterior segments prior to the cell divisions which generate their descendant clones. The results indicate that the survival or death of the distal tubule cell is determined by the identity of the host segment and that a given distal tubule cell could be effectively murdered or rescued by slipping its blast cell precursor into an appropriate segment. These findings suggest that the segment-specific pattern of distal tubule cell survival is not inherent to the O cell line, but arises from interactions with surrounding tissues.

2/7/3 (Item 3 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

5872423 BIOSIS Number: 84004988
DETERMINATION OF CLEAVAGE PATTERN IN EMBRYONIC BLAST CELLS OF THE LEECH
SHANKLAND M
DEP. ANATOMY AND CELLULAR BIOLOGY, HARVARD MED. SCH., BOSTON, MASS. 02115.
DEV BIOL 120 (2). 1987. 494-498. CODEN: DEBIA
Full Journal Title: Developmental Biology
Language: ENGLISH
The o blast cells of the leech embryo become committed to one of two alternative cleavage geometries shortly before they divide. Cleavage geometry depends upon the presence or the adjoining p bandlet, and if that bandlet is ablated, the pattern of o blast cell cleavages will undergo an abrupt transition several hours later. Previous work has shown that the o blast cell becomes committed to the formation of a particular complement of postmitotic descendants early in its differentiation, but the present findings suggest that cleavage pattern and descendent fate are determined at separate committment events.

2/7/4 (Item 4 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4502851 BIOSIS Number: 78076674
ACETYL CHOLINE SENSITIVITY IN REPLICATING SATELLITE CELLS
EUSEBI F; MOLINARO M
VIA P. FOSCARI 116, 00139 ROME, ITALY.
MUSCLE NERVE 7 (6). 1874. 488-492. CODEN: MUNED
Full Journal Title: Muscle & Nerve
Language: ENGLISH

Mononucleate myogenic cells lying within skeletal muscle fiber endomysium, the so-called satellite cells (SC), isolated from adult leg muscle of normal or dystrophic mice were studied by electrophysiological techniques. Normal SC responded to iontophoretic acetylcholine (ACh) by depolarization even during the replicative phase. Acetylcholine sensitivity increased after cell fusion. Replicating SC from dystrophic muscle did not exhibit any sensitivity to ACh and neither did embryonic myoblasts.

2/7/5 (Item 5 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4368748 BIOSIS Number: 77044075
THE EMBRYONIC CELL LINEAGE OF THE NEMATODE CAENORHABDITIS-ELEGANS
SULSTON J E; SCHIERENBERG E; WHITE J G; THOMSON J N
DEP. MOLECULAR CELLULAR AND DEVELOPMENTAL BIOL., UNIV. COLORADO, BOULDER, COLO. 80309.
DEV BIOL 100 (1). 1983. 64-119. CODEN: DEBIA
Full Journal Title: Developmental Biology
Language: ENGLISH

The embryonic cell lineage of C. elegans was traced from zygote to newly hatched larva, with the result that the entire cell lineage of this organism is now known. During embryogenesis 671 cells are generated; in the hermaphrodite 113 of these (in the male 111) undergo programmed death and the remainder either differentiate terminally or become postembryonic blast cells. The embryonic lineage is highly invariant, as are the fates of the cells to which it gives rise. In spite of the fixed relationship between cell ancestry and cell fate, the correlation between them lacks much obvious pattern. Thus, although most neurons arise from the embryonic ectoderm, some are produced by the mesoderm and a few are sisters to muscles; again, lineal boundaries do not necessarily coincide with functional boundaries. Cell ablation experiments (and previous cell isolation experiments) demonstrate substantial cell autonomy in at least some sections of embryogenesis. The cell lineage itself plays an important role in determining cell fate. The origin of the repeat units (partial segments) in the body wall, the generation of the various orders of symmetry, the analysis of the lineage in terms of sublineages and evolutionary implications are discussed.

2/7/6 (Item 6 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4329746 BIOSIS Number: 77005073
BETA NERVE GROWTH FACTOR RECEPTORS ON GLIAL CELLS CELL-CELL INTERACTION BETWEEN NEURONS AND SCHWANN CELLS IN CULTURES OF CHICK SENSORY GANGLIA
ZIMMERMANN A; SUTTER A
PHARMAKOLOGISCHES INSTITUT DER FREIEN UNIV. BERLIN, THIELALLE 69/73, D-1000 BERLIN 33, FRG.
EMBO (EUR MOL BIOL ORGAN) J 2 (6). 1983. 879-886. CODEN: EMJOD
Full Journal Title: EMBO (European Molecular Biology Organization) Journal
Language: ENGLISH
Receptors for .beta.-nerve growth factor (.beta.NGF), so far regarded as specific cell surface markers of certain peripheral chick neurons, were found to be expressed on cultured non-neuronal cells of chick embryo dorsal root ganglia (drg) (Kd.beta.NGF = 2 .times. 10-9 M). Autoradiography revealed that binding of [125I].beta.NGF was restricted to a subpopulation of the non-neuronal drg cells. Cultured embryonic skin fibroblasts, liver cells, gut cells, muscle fibroblasts, myoblasts, and myotubes, as well as macrophages and the cell lines [mouse embryonic fibroblast] 3T3, 3T3SV40, [baby hamster kidney] BHK, BHK Py, [mouse carcinoma] PCC3 and [hamster kidney] ND1, did not express receptors for .beta.NGF. Non-neuronal drg cells obtained by a procedure designed for the preparation of pure Schwann cells, as well as RN6 Schwannoma cells, were .beta.NGF receptor positive. The .beta.NGF receptor-positive non-neuronal drg cells displayed behavior typical of Schwann cells in their interaction with drg neurons in single cell, as well as explant cultures. Three stages of neuron-Schwann cell interaction were discernible: association (neurites preferentially grew over .beta.NGF receptor-positive non-neuronal cells); cell division/alignment (.beta.NGF receptor-positive non-neuronal cells were induced to proliferate and aligned and elongated along neurites); ensheathment (the outline of .beta.NGF receptor-positive non-neuronal cells and neurites merged). In drg cell cultures prepared from embryonic stages E6-E10, 25-40% of the non-neuronal cells were .beta.NGF receptor-positive. Later in development, from E12 onward, .ltoreq. 1% of the cultured non-neuronal cells expressed .beta.NGF receptors.

2/7/7 (Item 7 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4281796 BIOSIS Number: 27045631
AN ELEVATED CONTENT OF A UNIQUE LIPID IN DYSTROPHIC CHICKEN EMBRYONIC MYO

BLAST MEMBRANES
KESTER M; PRIVITERA C A
S.U.N.Y. BUFFALO, HOCHSTETTER HALL 651, BUFFALO, N.Y. 14260.
J EXP ZOOL 230 (1). 1984. 159-162. CODEN: JEZOA
Full Journal Title: Journal of Experimental Zoology
Language: ENGLISH

2/7/8 (Item 8 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4280577 BIOSIS Number: 27044412
STRUCTURAL ANALYSIS OF AN EXPRESSED CALMODULIN PSEUDOGENE
STEIN J P
UNIV. TEXAS HEALTH SCI. CENT., HOUSTON, TEX.
SYMPOSIUM ON THE MOLECULAR BIOLOGY OF DEVELOPMENT HELD AT THE 13TH ANNUAL UCLA (UNIVERSITY OF CALIFORNIA-LOS ANGELES) SYMPOSIA, LOS ANGELES, CALIF., USA, MAR. 31-APR. 7, 1984. J CELL BIOCHEM 0 (8 PART B). 1984. 29. CODEN: JCBSD
Language: ENGLISH

2/7/9 (Item 9 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4220721 BIOSIS Number: 26073064
EXPRESSION OF CELL DIFFERENTIATION AND CELL TRANSFORMATION BY EMBRYONIC CHONDRO BLAST PRECURSOR CELLS INFECTED WITH ROUS SARCOMA VIRUS
BOETTIGER D
UNIV. OF PA., PHILADELPHIA, PA 19104.
11TH ANNUAL CETUS-UCLA (UNIVERSITY OF CALIFORNIA-LOS ANGELES) SYMPOSIUM ON TUMOR VIRUSES AND DIFFERENTIATION, SQUAW VALLEY, CALIF., USA, MAR. 21-27, 1982. J CELL BIOCHEM SUPPL. 0 (6). 1982. 222. CODEN: JCBSD
Language: ENGLISH

2/7/10 (Item 10 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4185198 BIOSIS Number: 26037541
DIFFERENTIAL ABILITY OF MURINE TROPHO BLAST AND EMBRYONIC CELLS TO INDUCE CYTO TOXIC LYMPHOCYTES IN-VITRO
SMITH G
ROYAL NATIONAL HOSPITAL FOR RHEUMATIC DISEASES, UPPER BOROUGH WALLS,

BATH, BA1 1RL, UK.
TRANSPLANTATION (BALTIMORE) 36 (2). 1983. 224-226. CODEN: TRPLA
Full Journal Title: TRANSPLANTATION (Baltimore)
Language: ENGLISH

2/7/11 (Item 11 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4000251 BIOSIS Number: 75047610
IN-VITRO BEHAVIOR OF EMBRYONIC MOUSE TOOTH BUDS MAINTENANCE OF CORONAL MORPHOLOGY AND MINERALIZATION
BOUKARI A; RUCH J V
INSTITUT DE BIOLOGIE MEDICALE, FACULTE DE MEDECINE, 67085 STRASBOURG CEDEX, FRANCE.
J BIOL BUCCALE 9 (4). 1981 (RECD. 1982). 349-361. CODEN: JBBUA
Full Journal Title: Journal de Biologie Buccale
Language: FRENCH
First mandibular embryonic mouse molars (day 18) were cultured for 8 days. Maintenance of crown pattern and amelogenesis were studied as a function of different culture conditions. When grown on top of semi-solid coagulum (composed of cock plasma, embryonic extract, fetal calf serum and MEM [minimum essential medium] or BG[bovine .gamma.-globulin]jb), the typical crown pattern was always conserved. Amelogenesis existed in 85% if the coagulum was composed of 60% BGjb, 30% plasma, 10% embryonic extract and 180 .mu.g/ml ascorbic acid. Embryonic extract did not inhibit the mineralization. When grown on Millipore filter in the presence of different media (MEM or BGjb supplemented with serum, embryonic extract and ascorbic acid) the crown pattern was always disturbed. Amelogenesis was generally initiated. In absence of serum and embryonic extract, chemically defined media (MEM or BGjb supplemented with glutamine, glycine and ascorbic acid) allowed functional differentiation of odontoblasts and polarization of ameloblasts. These cells did not secrete enamel. If these defined media were devoid of ascorbic acid, predentin was secreted but necrosis of dental papilla cells was observed.

2/7/12 (Item 12 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3830735 BIOSIS Number: 24038094
TRANSMISSION ELECTRON MICROSCOPY AND ELECTRON PROBE MICRO ANALYSIS STUDY OF CALCIUM TRANSPORT BY PERIOSTEAL CELLS
WEAKS-DYBVIG M; COLEMAN J; YOUNG L; WADE P; NEUMAN W
WASHINGTON UNIV. SCH. DENTAL MED., ST. LOUIS, MO.

60TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH AND ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH, NEW ORLEANS, LA., USA, MARCH 18-21, 1982. J DENT RES 61 (SPEC. ISSUE). 1982. 256. CODEN: JDREA
Language: ENGLISH

2/7/13 (Item 13 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3774558 BIOSIS Number: 74074421
EFFECTS OF DI AZO OXO NORLEUCINE ON CELL KINETICS AND ODONTO BLAST DIFFERENTIATION IN CULTURED EMBRYONIC MOUSE MOLARS
OLIVE M; RUCH J V
INST. BIOL. MED., FAC. MED., 11 RUE HUMANN, 67085 STRASBOURG CEDEX, FR.
ARCH ORAL BIOL 27 (6). 1982. 505-512. CODEN: AOBIA
Full Journal Title: Archives of Oral Biology
Language: ENGLISH
Diazo-oxo-norleucine (DON), an analog of glutamine, prevented odontoblast differentiation in cultured tooth germs. Diazo-oxo-norleucine added after the onset of odontoblast differentiation did not affect the secretion of predentine or the functional differentiation of ameloblasts. DON decreased explant volume and modified cell kinetics, decreasing mitotic index, labeling index and number of grains per nucleus; the S phase of the cell cycle was lengthened. These modifications of cell kinetics should be considered when interpreting the effects of DON on odontoblast differentiation.

2/7/14 (Item 14 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3752529 BIOSIS Number: 74052392
STRUCTURAL CHANGES ASSOCIATED WITH FREEZING OF BOVINE EMBRYOS
MOHR L R; TROUNSON A O
DEP. OBSTET. GYNAECOL., MONASH UNIV., QUEEN VICTORIA MED. CENT., 172 LONSDALE ST., MELBOURNE, AUST. 3000.
BIOL REPROD 25 (5). 1981. 1009-1026. CODEN: BIREB
Full Journal Title: Biology of Reproduction
Language: ENGLISH
Structural changes associated with freezing and thawing were examined in bovine embryos at 3 developmental stages: day 5, day 7 and day 13 (day 0 = day of estrus). Embryos collected at day 5 had 8-16 cells and contained numerous vesicles and primitive junctional regions between some adjacent blastomeres. After cooling to 4.degree. C, the distribution of organelles

within blastomeres and the spacial arrangement of blastomeres was disrupted. Day 7 embryos were at the early blastocyst stage and contained an intact ring of trophoblast cells enclosing a disc of embryonic cells. Adjacent trophoblast cells were attached by a region of junctional complexes which were structurally unaffected by freezing. Damage to blastocysts after freezing included loss of integrity of trophoblast plasma membrane, leading to collapse of the blastocoele. When some collapsed blastocysts were cultured for 24 h after thawing, a smaller intact ring of trophoblast cells had reformed around the embryonic cells and debris from cryoinjured cells were excluded from the blastocoele. Day 13 embryos contained 3 morphologically distinct cell types: a layer of trophectoderm, a disc of embryonic cells and a continuous layer of endoderm cells surrounding the blastocoelic cavity. After freezing and thawing, the embryonic cells were structurally intact while the trophectoderm had substantial damage to all cell components. Cryoinjury in bovine embryos may be selective for 1 cell type within an embryo and its extent and nature are dependent on developmental stage.

2/7/15 (Item 15 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3738014 BIOSIS Number: 74037877
EFFECT OF HIGH MOLECULAR LEVAN ON IMPLANTATION AND EMBRYONIC DEVELOPMENT IN MICE
FEIN A; BERMAN Z; WOLMAN M
DEP. PATHOL., SACKLER SCH. MED., TEL AVIV UNIV., 61390 TEL AVIV.
ISR J MED SCI 17 (12). 1981 (RECD. 1982). 1127-1132. CODEN: IJMDA
Full Journal Title: Israel Journal of Medical Sciences
Language: ENGLISH
Pregnant Balb C mice were treated daily with levan beginning on the 1st or 9th day of pregnancy. Damage to embryos appeared on the 8th day in mice treated from the 1st day. In the 2nd group, the damage was apparent 2-4 days after the levan treatment was begun. In both groups the damaged and dead embryos were found side-by-side with apparently normal conceptuses. The damage seems to have been caused by lesions to the trophoblast since it only occurred after implantation and placentation, and it appeared to be different from the antitumoral or the graft-rejection delaying effects of levan.

2/7/16 (Item 16 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3724460 BIOSIS Number: 74024323

COMPLEMENTARY DNA CLONE ANALYSIS OF 6 CO REGULATED MESSENGER RNA SPECIES ENCODING SKELETAL MUSCLE CONTRACTILE PROTEINS

HASTINGS K E M; EMERSON C P JR

DEP. BIOL., GILMER HALL, UNIV. VA., CHARLOTTESVILLE, VA. 22901.

PROC NATL ACAD SCI U S A 79 (5). 1982. 1553-1557. CODEN: PNASA

Full Journal Title: Proceedings of the National Academy of Sciences of the United States of America

Language: ENGLISH

Ac[complementary]DNA cloning approach was used to investigate muscle gene regulation during differentiation of cultured embryonic quail myoblasts. A cNDA clone library of cultured myofiber poly(A)+RNA was constructed and screened by colony hybridization with cDNA probes of myoblast and myofiber RNA. Myofiber-specific cDNA clones (28) were identified and, by cross-hybridization analysis, these clones were found to represent, at most, 18 different myofiber-specific RNA. Of these RNA, 6 were identified by sequence analysis of the cDNA clones. These 6 RNA encode the contractile proteins .alpha.-actin, .alpha.-tropomyosin, myosin heavy chain, myosin light chain 2, troponin C and troponin I. The embryonic muscle contractile protein sequences are identical with, or closely match, those of adult skeletal muscle proteins and include both fast fiber (myosin light chain 2 and troponin I) and slow fiber (troponin C) isotypes. RNA gel transfer hybridization analysis showed that the cellular abundances of these contractile protein mRNA increase 20- to 30-fold or more during myoblast differentiation. Coordinate activation of contractile protein synthesis during myogenesis is controlled by mechanisms that direct the accumulation of contractile protein mRNA rather than their translational utilization. With the possible exception of myosin heavy chain, the contractile protein genes expressed by cultured embryonic muscle encode adult muscle proteins of both fast and slow fiber types, consistent with a co-activation-selective repression model of gene regulation during fiber type differentiation in developing skeletal muscle.

3723463 BIOSIS Number: 74023326

EVALUATING FETO MATERNAL HEMORRHAGE BY ALPHA FETO PROTEIN AND KLEIHAUER TEST FOLLOWING THERAPEUTIC ABORTIONS

HAY D L; HORACEK I; PAULL J

DEP. PATHOL., ROYAL WOMENS HOSP., 132 GRATTAN ST., CARLTON 3053, VICTORIA, AUST.

INT J GYNAECOL OBSTET 20 (1). 1982. 1-4. CODEN: IJGOA

Full Journal Title: International Journal of Gynaecology and Obstetrics

Language: ENGLISH

In a survey of 75 patients at 6-11 wk gestation, fetomaternal hemorrhage

(FMH) was detected by significant rises (> 2 SD) in maternal .alpha.-fetoprotein (AFP) levels in 57% of patients, while increased fetal cells were detected by the Kleihauer test in 24% of patients. With increasing gestation, FMH was detected more readily by both tests; in evaluating FMH at < 10 wk gestation, AFP was a more sensitive and reliable marker than the Kleihauer test. Apparently, there is a gray zone for the Kleihauer test in early gestation, when erythroblasts containing embryonic hemoglobins are gradually replaced in the fetal circulation by erythrocytes containing fetal Hb.

2/7/18 (Item 18 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3708857 BIOSIS Number: 74008720
PURIFICATION OF A NONHISTONE PROTEIN FRACTION FROM AMPHIBIAN LIVER BIOLOGICALLY ACTIVE IN THE INHIBITION OF NEURO BLAST DIFFERENTIATION OF THE SAME SPECIES
MATHIEU C; DUPRAT A M; ZALTA J P
CENT. RECHERCHE BIOCHIMIE, GENETIQUE CELLULAIRES, CNRS, CEDEX, FRANCE.
EXP CELL RES 137 (2). 1982. 431-437. CODEN: ECREA
Full Journal Title: Experimental Cell Research
Language: ENGLISH
A nuclear protein fraction was previously extracted from amphibia [Pleurodeles waltlii] liver cells which exerts a species-specific inhibitory effect on neuroblast differentiation. The purification of this fraction by hydroxyapatite chromatography is described. Two fractions were obtained: a histone fraction eluted with 1 mM sodium phosphate buffer and a nonhistone protein fraction eluted with 200 mM sodium phosphate buffer. Both fractions were tested on embryonic amphibia cultures for biological activity. Examination by phase contrast microscopy of embryonic cells treated by the nonhistone fraction revealed a species-specific inhibition of neuroblast differentiation and a good preservation of myoblast differentiation. Since the latter cell type possesses long-lived mRNAs, the nonhistone proteins may play an important role in specific differentiation processes. The different response of the 2 cell types may indicate that nonhistone proteins act at the transcriptional level of mRNA or on its maturation.

2/7/19 (Item 19 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3540629 BIOSIS Number: 23008004
CONTROL OF CYCLIC NUCLEOTIDE PHOSPHO DI ESTERASES

SETH P K; NARINDRASORASAK S; TAN L; SANWAL B D
DEP. BIOCHEMISTRY, UNIV. WESTERN ONTARIO, HEALTH SCI. CENTRE, LONDON, ONTARIO N6A 5CL, CANADA.
ANNUAL MEETING AND 2ND CONGRESS OF THE FEDERATION OF ASIAN AND OCEANIAN BIOCHEMISTS, BANGALORE, INDIA, DEC. 14-18, 1980. INDIAN J BIOCHEM BIOPHYS 18 (4). 1981. 1-2. CODEN: IJBBB
Language: ENGLISH

2/7/20 (Item 20 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3523068 BIOSIS Number: 22065451
SELECTIVE RELEASE OF ACTIN ISOMERS DURING MUSCLE DEVELOPMENT IN-VITRO
SANDRA A; RUPPERT T; RUBENSTEIN P
DEPARTMENT OF ANATOMY, UNIVERSITY OF IOWA, IOWA CITY, IA.
21ST ANNUAL MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY, ANAHEIM, CALIF., USA, NOV. 9-13, 1981. J CELL BIOL 91 (2 PART 2). 1981. 356A. CODEN: JCLBA
Language: ENGLISH

2/7/21 (Item 21 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3401141 BIOSIS Number: 72033532
GLUCO CORTICOIDS ENHANCE GLUCOSE UPTAKE AND AFFECT DIFFERENTIATION AND BETA ADRENERGIC RESPONSIVENESS IN MUSCLE CELL CULTURES
SHONBERG M; SMITH T J; KRICHEVSKY A; BILEZIKIAN J B
DEP. MED., COLL. PHYS. SURG., COLUMBIA, UNIV., NEW YORK, N.Y. 10032, USA.
CELL DIFFER 10 (2). 1981. 101-108. CODEN: CLDFA
Full Journal Title: Cell Differentiation
Language: ENGLISH
The role of glucocorticoids (GLC) in liver glycogen metabolism is well characterized; its role in peripheral tissues is not as well understood. GLC administration in vivo is associated with hyperglycemia, but it is not clear whether decreased glucose uptake in a peripheral tissue like muscle accounts, in part, for the effect. The relationship of glucose uptake to .beta.-adrenergic responsiveness was investigated in muscle cell cultures exposed to GLC. Under these conditions GLC and other serum factors are present in at least a 10-fold dilution relative to in vivo conditions. The GLC dexamethasone (DEX) induces a significantly enhanced Vmax for deoxyglucose uptake in the rat muscle cell lines L8 (200-400%) and L6E9 (50-100%). DEX inhibits cell fusion and promotes epithelioid morphology within the effective dose range (L8 > L6E9). Growth is slightly enhanced

(10-20%) at 0.1-1.0 .mu.M. In these cells DEX also inhibits intracellular .beta.-adrenergic-sensitive cAMP accumulation and reduces basal, catecholamine-sensitive and F--sensitive adenylate cyclase in cell homogenates. The effects of DEX on deoxyglucose uptake and .beta.-adrenergic responsiveness are dose (1 nM-0.1 nM) and time (1-3 days) dependent, and reversible. The degree of inhibition of the .beta.-adrenergic system seems to be directly related to the degree of enhancement of deoxyglucose uptake. The action of DEX on muscle cell glucose uptake is apparently related to its effect on the .beta.-adrenergic system.

2/7/22 (Item 22 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3309746 BIOSIS Number: 71032145
APPARENT COORDINATION OF THE BIOSYNTHESIS OF LIPIDS IN CULTURED CELLS ITS RELATIONSHIP TO THE REGULATION OF THE MEMBRANE STEROL PHOSPHO LIPID RATIO AND CELL CYCLING
CORNELL R B; HORWITZ A F
DEP. BIOCHEM. BIOPHYS., UNIV. PA. SCH. MED., PHILADELPHIA, PA. 19104.
J CELL BIOL 86 (3). 1980. 810-819. CODEN: JCLBA
Full Journal Title: Journal of Cell Biology
Language: ENGLISH
The coordination of the syntheses of the several cellular lipid classes with one another and with cell cycle control were investigated in proliferating [neonatal rat skeletal muscle] L6 myoblasts and fibroblasts [human embryonic long WI-38 fibroblasts and chick embryo fibroblasts CEF]. Cells cultured in lipid-depleted medium containing 1 of 2 inhibitors of hydroxymethylglutaryl-CoA reductase, 25-hydroxycholesterol or compactin, display a rapid, dose-dependent inhibition of cholesterol synthesis. Inhibition of the syntheses of each of the other lipid classes is 1st apparent after the rate of sterol synthesis is depressed several-fold. After the addition of the inhibitor for 24 h, the syntheses of DNA, RNA and protein also decline. The inhibition of sterol synthesis leads to a 3-fold reduction in the sterol:phospholipid ratio that parallels the development of proliferative and G1 cell cycle arrests and alterations in cellular morphology. All of these responses are reversed upon reinitiation of cholesterol synthesis or addition of exogenous cholesterol. A comparison of the timing of these responses with respect to the development of the G1 arrest indicates that the primary factor limiting cell cycling is the availability of cholesterol provided either from an exogenous source or by de novo synthesis. The G1 appears to be responsible for the general inhibition of macromolecular synthesis in proliferating cells treated with 25-hydroxycholesterol. The apparent coordinated inhibition of lipid synthesis is not a consequence of the G1 arrest but may give rise to it.

Sequential inhibition of lipid syntheses is also observed in cycling cells when the synthesis of choline-containing lipids is blocked by choline deprivation and is observed in association with G1 arrests caused by confluence or differentiation. In the nonproliferating cells the syntheses of lipid and protein do not appear coupled.

2/7/23 (Item 23 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3299428 BIOSIS Number: 71021827
HEMO GLOBIN FRACTIONS IN POST NATAL ONTOGENESIS OF THE GOLDEN HAMSTER MESOCRICETUS-AURATUS
IRZHAK L I; MOISEENKO N A
DEP. HUM. ANIM. PHYSIOL., SYKTYVKAR UNIV., SYKTYVKAR, USSR.
ZH EVOL BIOKHIM FIZIOL 16 (2). 1980. 112-119. CODEN: ZEBFA
Full Journal Title: Zhurnal Evolyutsionnoi Biokhimii i Fiziologii
Language: RUSSIAN
Using agar-agar and polyacrylamide gel electrophoresis, Hb of hamsters ranging from newborn to adults were divided into embryonic, fetal and adult fractions. Within the very 1st days of postnatal life, the relative content of embryonic Hb fractions and megaloblast reticulocytes significantly decreased.

2/7/24 (Item 24 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3198605 BIOSIS Number: 20061012
EFFECTS OF VINCRISTINE ON SKELETAL MUSCLE DIFFERENTIATING IN CELL CULTURE
TRAEGER F J
DIV. NUCL. PATHOL. ONCOL., MERCY HOSP., PITTSBURGH, PA.
THE 20TH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY, CINCINNATI, OHIO, USA, NOV. 14-18, 1980. J CELL BIOL 87 (2 PART 2). 1980. 260A. CODEN: JCLBA
Language: ENGLISH

2/7/25 (Item 25 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3060200 BIOSIS Number: 70010107
REGULARITIES AND RESTRICTIONS GOVERNING C BAND VARIATION IN ACRIDOID GRASSHOPPERS

KING M; JOHN B
DEP. POPUL. BIOL., RES. SCH. BIOL. SCI., AUST. NATL. UNIV., CANBERRA, A.C.T. 2601, AUST.
CHROMOSOMA (BERL) 76 (2). 1980. 123-150. CODEN: CHROA
Full Journal Title: CHROMOSOMA (Berlin)
Language: ENGLISH

C[constitutive heterochromatin]-band patterns were analyzed in embryonic neuroblast chromosomes of 23 Australian species of acridoids [(Orthoptera): from the families Pyrgomorphidae and Acrididae]. All of them showed paracentromeric C-bands but these varied considerably in size both within and between species. Many of them also showed interstitial C-bands in from 1-5 members of the haploid complement and in 2 cases (Atractomorpha similis and a new genus 95 ochracea) larger numbers of interstitial bands were present. Terminal C-bands were the least common though again when present they could be found in 1-6 members of the complement except in the cases of A. similis and 95 ochracea where still larger numbers occur. In 5 of the 23 spp., the megameric chromosome pair was distinctively C-banded. The B-chromosomes found in 3 spp. were also strikingly different in C-band characteristics compared to the standard A-chromosomes. Differences in the number of very small chromosomes present in different species clearly cannot be explained in terms of differences in their C-band content. Neither are differences in genome size simply related to differences in the total amount of C-band material indicating that changes in the size of the genome in this group have involved alterations in both enchromatin and heterochromatin content. Similar amounts of C-band material may be distributed throughout the complement in very different ways in different species.

2/7/26 (Item 26 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3059971 BIOSIS Number: 70009878
ELECTRICAL EXCITABILITY A SPECTRUM OF PROPERTIES IN THE PROGENY OF A SINGLE EMBRYONIC NEURO BLAST
GOODMAN C S; SPITZER N C; PEARSON K G
DEP. BIOL. SCI., STANFORD UNIV., STANFORD, CALIF. 94305, USA.
PROC NATL ACAD SCI U S A 77 (3). 1980. 1676-1680. CODEN: PNASA
Full Journal Title: Proceedings of the National Academy of Sciences of the United States of America
Language: ENGLISH

The range of some properties of the progeny of a single embryonic precursor cell in the grasshopper [Schistocerca nitens] was examined. The .apprxeq. 100 progeny of this single neuroblast share certain features such as their transmitter and some aspects of their morphology; at the same time, they demonstrate a broad spectrum of electrical properties, from

spiking to nonspiking neurons. The first-born progeny are spiking neurons with peripheral axons. Many of the progeny, including all of the last-born, do not generate action potentials. The nonspiking progeny are local intraganglionic neurons and appear to compose a major proportion of the progeny of this neuroblast. All of the nonspiking neurons have Ca inward current channels and can make action potentials when outward current channels are blocked. A model is proposed for grasshopper neurogenesis based on cell lineage such that certain features (e.g., transmitter) are shared by the progeny of all cell divisions from a single neuroblast, and other features (e.g., electrical properties) are shared by the progeny of a given birth position (e.g., first vs. last born) from all of the neuroblasts. According to this model, the first-born progeny from all neuroblasts are spiking neurons, whereas the last-born are nonspiking.

2/7/27 (Item 27 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

2998369 BIOSIS Number: 69035776
DEVELOPMENT OF CHICK EMBRYO MESO BLAST FORMATION OF THE EMBRYONIC AXIS AND ESTABLISHMENT OF THE METAMERIC PATTERN
MEIER S
DEP. ZOOL., UNIV. TEX., AUSTIN, TEX. 78712, USA.
DEV BIOL 73 (1). 1979. 25-45. CODEN: DEBIA
Full Journal Title: Developmental Biology
Language: ENGLISH
The mesoblast of the primary organizer region of the developing chick embryo at the early head process stage was examined with the scanning electron microscope. The mesoblast layer is patterned from its inception at the primitive streak. Viewed dorsally, the mesoblast region most recently transversed by Hensen's node is metameric. Each segment consists of two 175 .mu.m diameter circular buttons of paraxial mesoblast (somitomeres) and an enclosed axial region. These tripartite segments are stacked tandemly and mark precisely, in the ectoderm above, the limit of neural plate formation. Viewed ventrally, the metameric pattern of the mesoblast is most closely mimicked by underlying endoblast, which shows corresponding radially arranged wedge-shaped cells in somitomere-sized circular patches. At this stage of development, each paraxial somitomere is a slightly hollowed, squat cylinder, composed of tapering mesenchymal cells whose long axes are directed toward the core center. Closely timed with neurulation, somitomeres undergo morphogenesis, being first converted to triangular wedges and, finally, condensed into cubes. Anteriorly, somitomeres participate in branchiomeric development, while posteriorly, they develop into somites. Examination of segmental plates shows that they consist of about 11 tandem somitomeres not visible by light microscopy. The most mature somitomeres, closest to the emerging somites, are delineated from

one another by cellular orientations and the progressive buildup of fibrous extracellular matrix. The least mature somitomeres are not as well defined, but appear initially just posterior to Hensen's node and merge medially with the notochordal process. The emergence of somitomeres from the paraxial mesoblast of the primitive streak evidently is the result of its association with nodel cells. This combined association of the mesoblast heralds primary induction and establishes the metameric pattern of the basic body plan.

2/7/28 (Item 28 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

2621963 BIOSIS Number: 17024366
PRO ENAMEL ENAMEL POLY PEPTIDES A CONCEPT
CHRISPENS J; WELIKY B; BRINGAS P; SLAVKIN H
J DENT RES 58 (SPEC ISSUE B). 1979 988-990 CODEN: JDREA
Full Journal Title: Journal of Dental Research

2/7/29 (Item 29 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

2581956 BIOSIS Number: 16049359
SURFACE ANTIGENS OF THE EMBRYONIC CHICK MYO BLAST EXPRESSION ON FRESHLY TRYPSINIZED CELLS
FRIEDLANDER M; FISCHMAN D A
J SUPRAMOL STRUCT 7 (3/4). 1977 (RECD 1978) 323-338 CODEN: JSPMA
Full Journal Title: Journal of Supramolecular Structure

2/7/30 (Item 30 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

2494190 BIOSIS Number: 66041095
EVOLUTION OF THE NERVOUS SYSTEM ROLE OF ONTOGENETIC MECHANISMS IN THE EVOLUTION OF MATCHING POPULATIONS
KATZ M J; LASEK R J
DEP. ANAT., CASE WEST. RESERVE UNIV., CLEVELAND, OHIO 44106, USA.
PROC NATL ACAD SCI U S A 75 (3). 1978 1349-1352. CODEN: PNASA
Full Journal Title: Proceedings of the National Academy of Sciences of the United States of America
Language: ENGLISH
Nervous systems are composed of populations of cells that are

synaptically connected in a highly predictable manner, and two interconnected populations may be called a pair of matching populations. Heritable genetic changes that affect a pair of matching populations can be evolutionary only when this matching quality is not disrupted. Two types of heritable change are distinguished. Concordant heritable changes autonomously preserve the match and are thus automatically candidates for what is called type I evolutionary change. Nonconcordant heritable changes, on the other hand, are those that do not autonomously preserve the match. Those nonconcordant heritable changes that can use other normally present ontogenetic mechanisms to preserve the match are candidates for what is called type II evolutionary change. One example of such an ontogenetic mechanism consists of the production of excess neuroblasts and the subsequent weeding out (via cell death) of those that do not successfully match. Because normal ontogeny is an integral part of type II evolutionary change, ontogenetic manipulations can give evolutionary insights. Embryonic graft experiments, in particular, can elucidate the nature of ontogenetic mechanisms that participate in type II changes. Some developmental experiments can thus be considered evolutionary experiments.

2/7/31 (Item 31 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

2023413 BIOSIS Number: 13037969
A MAJOR PHOSPHO PROTEIN FOUND IN NUCLEI OF 3 DIFFERENTIATING CELL TYPES
HOUKOM E C; LOUGH J; NEUMANN J R; INGRAM V M
FED PROC 36 (3). 1977 785 CODEN: FEPRA
Full Journal Title: Federation Proceedings

2/7/32 (Item 32 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1923321 BIOSIS Number: 62012881
FROM CLEAVAGE TO PRIMITIVE STREAK FORMATION A COMPLEMENTARY NORMAL TABLE AND A NEW LOOK AT THE 1ST STAGES OF THE DEVELOPMENT OF THE CHICK PART 1 GENERAL MORPHOLOGY
EYAL-GILADI H; KOCHAV S
DEV BIOL 49 (2). 1976 321-337. CODEN: DEBIA
Full Journal Title: Developmental Biology

2/7/33 (Item 33 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1813604 BIOSIS Number: 12083164
IMMUNOGENICITY OF MOUSE TROPHO BLAST AND EMBRYONIC SAC
SEARLE R F; JENKINSON E J; JOHNSON M H
NATURE (LOND) 255 (5511). 1975 719-720 CODEN: NATUA
Full Journal Title: NATURE (London)

2/7/34 (Item 34 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1810086 BIOSIS Number: 12079646
NEW OBSERVATIONS ON RABBIT BLASTOCYSTS AFTER IN-VITRO EXPOSURE TO THALIDOMIDE SOME CORRELATED SCANNING ELECTRON MICROSCOPY AND TRANSMISSION ELECTRON MICROSCOPY STUDIES
MOUSTAFA L A
JOHARI, OM AND ROBERT P. BECKER (ED.). SCANNING ELECTRON MICROSCOPY 1976, VOL II. PROCEEDINGS OF THE WORKSHOP'S ON BIOLOGICAL APPLICATIONS; PARTS V,VI,VII,VIII. ADVANCES IN BIOMEDICAL APPLICATIONS OF THE SCANNING ELECTRON MICROSCOPE; SCANNING ELECTRON MICROSCOPY IN REPRODUCTIVE BIOLOGY; PLANT SCIENCES APPLICATIONS OF THE SCANNING ELECTRON MICROSCOPE; ZOOLOGICAL APPLICATIONS OF THE SCANNING ELECTRON MICROSCOPE. XII+708P. ILLUS. IIT RESEARCH INSTITUTE: CHICAGO, ILL., U.S.A. ISBN 0-915802-10-4. 1976 385-392 CODEN: 05228

2/7/35 (Item 35 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1696850 BIOSIS Number: 60041418
DYS ERYTHROPOIESIS AND ANNULATE LAMELLAE
VERWILGHEN R L; BROECKAERT-VAN ORSHOVEN A; HEYNEN M J
BR J HAEMATOL 30 (3). 1975 307-310. CODEN: BJHEA
Full Journal Title: British Journal of Haematology

2/7/36 (Item 36 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1599298 BIOSIS Number: 59018870
DIFFERENTIAL SUSCEPTIBILITY OF MOUSE TROPHO BLAST AND EMBRYONIC TISSUE TO IMMUNE CELL LYSIS
JENKINSON E J; BILLINGTON W D
TRANSPLANTATION (BALTIMORE) 18 (3). 1974 286-289. CODEN: TRPLA

Full Journal Title: TRANSPLANTATION (Baltimore)

2/7/37 (Item 37 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1436814 BIOSIS Number: 58036404
ULTRASTRUCTURE OF EARLY NEURO MUSCULAR CONTACTS IN THE CHICK EMBRYO
DANEO L S; FILOGAMO G
J SUBMICROSC CYTOL 5 (3). 1973 (RECD 1974) 219-225. CODEN: JSMCB
Full Journal Title: Journal of Submicroscopic Cytology

2/7/38 (Item 38 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1330824 BIOSIS Number: 57005420
STUDIES ON FERTILITY OF DDK MICE RECIPROCAL CROSSES BETWEEN DDK AND C-57BL-6J STRAINS AND EXPERIMENTAL TRANSPLANTATION OF THE OVARY
WAKASUGI N
J REPROD FERTIL 33 (2). 1973 283-291. CODEN: JRPFA
Full Journal Title: Journal of Reproduction and Fertility

2/7/39 (Item 39 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1036130 BIOSIS Number: 09071069
THE STUDY OF THE 3 DIMENSIONAL STRUCTURAL RELATIONSHIPS IN CONNECTIVE TISSUES BY HIGH VOLTAGE ELECTRON MICROSCOPY
GLAUERT A M; MAYO C R
J MICROSC (OXF) 97 (1-2). 1973 83-94 CODEN: JMICA
Full Journal Title: Journal of Microscopy (Oxford)

2/7/40 (Item 40 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

1031459 BIOSIS Number: 09066398
HEMOPOIETIC ORIGIN OF BONE MARROW DERIVED CELLS IN THE MOUSE
STUTMAN O
JANKOVIC, BRANISLAV D. AND KATARINA ISAKOVIC (ED.). ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY, VOL. 29. MICROENVIRONMENTAL ASPECTS OF

IMMUNITY. PROCEEDINGS OF THE FOURTH INTERNATIONAL CONFERENCE ON LYMPHATIC TISSUE AND GERMINAL CENTERS IN IMMUNE REACTIONS. DUBROVNIK, YUGOSLAVIA, JUNE 26-30, 1972. XXXII+726P. ILLUS. PLENUM PRESS: NEW YORK, N.Y., U.S.A.; LONDON, ENGLAND. 1973 19-26 CODEN: 03112

2/7/41 (Item 41 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

994224 BIOSIS Number: 09029163
CLEAVAGE IN MAMMALS DIFFERENTIATION OF TROPHO BLAST AND EMBRYONIC CELLS
DENKER H W
VERH ANAT GES 66. 1971 (RECD 1973) 267-272 CODEN: VHAGA
Full Journal Title: Verhandlungen der Anatomischen Gesellschaft

2/7/42 (Item 42 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

682872 BIOSIS Number: 52117837
CHANGES CAUSED BY THE PREPARATION ON LETHALLY DAMAGED TISSUE CULTURE CELLS
SCHAEFER D
MIKROSKOPIE 26 (1-2). 1970 26-29. CODEN: MIKSA
Full Journal Title: Mikroskopie

2/7/43 (Item 43 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

595304 BIOSIS Number: 52030269
CELL SORTING OUT ACCORDING TO SPECIES IN AGGREGATES CONTAINING MOUSE AND CHICK EMBRYONIC LIMB MESO BLAST CELLS
BURDICK M L
J EXP ZOOL 175 (3). 1970 357-368. CODEN: JEZOA
Full Journal Title: Journal of Experimental Zoology

2/7/44 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09130808 95060808
Expression of a rlf/L-myc minigene inhibits differentiation of embryonic

stem cells and embroid body formation.
MacLean-Hunter S; Makela TP; Grzeschiczek A; Alitalo K; Moroy T
Institut fur Molekularbiologie und Tumorforschung, Philipps Universitat Marburg, Germany.
Oncogene (ENGLAND) Dec 1994, 9 (12) p3509-17, ISSN 0950-9232 Journal Code: ONC
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Rearrangements of the L-myc proto-oncogene with the cellular gene rlf occur in a subset of human small cell lung carcinoma (SCLC) resulting in the expression of a fusion protein. To investigate whether expression of such a rlf/L-myc fusion protein could contribute to the development of SCLC we constructed a chimeric minigene where the rlf first exon and the L-myc second and third exon are under the control of the rlf promoter thereby recapitulating the events of the rearrangement. Attempts to generate transgenic mice with this minigene showed that mouse embryos containing high copy numbers of the rlf/L-myc minigene fail to develop, suggesting that the expression of a rlf/L-myc fusion protein interferes with early differentiation processes. To investigate the nature of this potential embryonic lethality further, we transfected the rlf/L-myc construct stably into embryonic stem (ES) cells. Transfected ES lines that express the rlf/L-myc construct do not show a higher proliferation rate than the parental ES line but fail to properly develop embroid bodies. In addition, outgrowth and differentiation of cells from embroid bodies was severely impaired in ES cells expressing the rlf/L-myc construct when compared to normal ES cells, again suggesting an interference of rlf/L-myc expression with proper differentiation. Expression of a rlf/L-myc fusion may therefore be of critical importance in tumorigenesis by blocking differentiation and thereby allowing continued proliferation of cells and the acquisition of further mutations leading to a fully malignant tumor.

2/7/45 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08373408 93083408
Origin of segmental identity in the development of the leech nervous system.
Shankland M; Martindale MQ; Nardelli-Haefliger D; Baxter E; Price DJ
Department of Anatomy and Cellular Biology, Harvard Medical School, Boston, Massachusetts 02115.
Development (ENGLAND) 1991, Suppl 2 p29-38, ISSN 0950-1991 Journal Code: ECW
Contract/Grant No.: RO1-HD21735, HD, NICHD; F32-GM12481, GM, NIGMS
Languages: ENGLISH
Document type: JOURNAL ARTICLE

The leech embryo develops its segmental body plan by means of a stereotyped cell lineage. Each hemilateral segment arises from a small set of embryonic blast cells via a comparable sequence of formative cell divisions, and for the most part, lineally homologous cells manifest similar patterns of differentiation in the various hemisegments. Nonetheless, some identified central neurons undergo segment-specific or laterally asymmetric patterns of neuropeptide expression and/or cell death. Certain aspects of this regional diversification result from competitive cell interactions which occur at the level of the postmitotic neuron. However, the neuron's segmental identity is lineally determined, being inherited from its blast cell progenitor over several intervening rounds of mitosis. To learn more about the molecular basis of this phenomenon, we have isolated and begun to characterize leech homeobox genes which are related to the genes that govern segmental identity in other organisms.

2/7/46 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

852798 EMBASE No: 78018605
Possible detection of a human embryonic leukemic antigen
Akimova G.V.; Eremeev V.S.; Vyadrov M.M.; et al.
Lab. Exp. Ther. Tum., P.A. Gertsen Moscow Oncol. Res. Inst., Moscow USSR
BULL.EXP.BIOL.MED. (USA) , 1976, 82/7 (1060-1062) CODEN: BEXBA
LANGUAGES: ENGLISH
The possibility of detecting an embryonic leukemia antigen on blast cells of patients with acute leukemia was studied by means of a cytotoxic test with sera and 7S an 19S serum immunoglobulins of placental blood. The presence of an antigen, detectable by antibodies of the placental blood of parturient women but absent on leukocytes of healthy donors, was demonstrated on blast cells of patients with acute leukemia.

2/7/47 (Item 1 from file: 159)
DIALOG(R)File 159:Cancerlit(R)

00229995 79803305 CATH/79803305
THE GENERALITY OF METHYLGLYOXAL BIS(GUANYLHYDRAZONE)-INDUCED MITOCHONDRIAL DAMAGE AND THE DEPENDENCE OF THIS EFFECT ON CELL PROLIFERATION
Mikles-Robertson F; Feuerstein B; Dave C; Porter CW
Dept. Experimental Therapeutics, Grace Cancer Drug Center, Roswell Park Memorial Inst., New York State Dept. Health, Buffalo, NY, 14263
Cancer Res; 39(6,part1):1919-1926 1979 ISSN 0008-5472
Languages: ENGLISH

Document Type: JOURNAL ARTICLE

The effects of methylglyoxal-bis(guanylhydrazone) (MGBG: 10 uM) on mitochondria were studied in logarithmic phase cultures of mouse lymphocytic leukemia cells (P388 or L1210), mouse fibroblasts (L cells), human leukemic cells (NALM-1; chronic myelocytic leukemia in blast crisis), and mouse embryonic fibroblasts (C3H/10T 1/2). The ultrastructural damage observed 12-72 hr after the beginning of MGBG exposure was almost identical in all cell types; the mitochondria were markedly distended, and their inner structures were distorted or lost. NALM-1 cells had conspicuous electron-dense granules in the mitochondrial matrix. There was a correlation between the onset of mitochondrial damage in each cell line and its generation time, suggesting a relationship between proliferative activity and MGBG-induced mitochondrial damage. In phytohemagglutinin-stimu lated normal human lymphocyte cultures, MGBG induced mitochondrial damage only in cells undergoing blastogenesis. In cultures of C3H/10T 1/2 mouse embryo fibroblasts, MGBG affected only dividing cells in subconfluent cultures. It is suggested that mitochondrial damage may be related to inhibition of spermidine and spermine biosynthesis by MGBG. (32 Refs)

2/7/48 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

108164244 CA: 108(19)164244g JOURNAL

snRNPs from mouse teratocarcinoma cells reacting with polyclonal anti-Sm and anti-m32,2,7G antibodies and biochemical characterization of the snRNPs

AUTHOR(S): Matsuda, Motoo; Yamada, Takatsugu
LOCATION: Sch. Vet. Sci., Azabu Univ., Sagamihara, Japan, 229

JOURNAL: Jpn. J. Vet. Sci. DATE: 1987 VOLUME: 49 NUMBER: 6 PAGES: 981-7 CODEN: NJUZA9 ISSN: 0021-5295 LANGUAGE: English

SECTION:
CA209003 Biochemical Methods
CA215XXX Immunochemistry

IDENTIFIERS: small ribonucleoprotein teratocarcinoma Sm antigen methylguanosine

DESCRIPTORS:
Antigens,Sm...
of small nuclear ribonucleoproteins
Chromatography,column and liquid, preparative, immunoadsorption...
of small nuclear ribonucleoproteins, of teratocarcinoma cell line
Ribonucleoproteins,small nuclear RNA-contg....
purifn. and characterization of, of teratocarcinoma cell line
Carcinoma,terato-...
small nuclear ribonucleoproteins of embroid body of, purifn. and characterization of

CAS REGISTRY NUMBERS:

40027-70-1 of small nuclear ribonucleoproteins

2/7/49 (Item 1 from file: 76)
DIALOG(R)File 76:Life Sciences Collection

01869362 3669521
Expression of a RLF/L-MYC minigene inhibits differentiation of embryonic stem cells and embroid body formation
MacLean Hunter, S.; Maekelae, T.P.; Grzeschiczek, A.; Alitalo, K.; Moeroey, T.
Inst. Molekularbiol. und Tumorforsch., Philipps Univ. Marburg Emil-Mannkopff-str. 2, D-35037 Marburg, FRG
ONCOGENE vol. 9, no. 12, pp. 3509-3517 (1994)
ISSN: 0950-9232
DOCUMENT TYPE: Journal article LANGUAGE: ENGLISH
SUBFILE: Oncogenes & Growth Factors Abstracts; Genetics Abstracts

Rearrangements of the L-myc proto-oncogene with the cellular gene rlf occur in a subset of human small cell lung carcinoma (SCLC) resulting in the expression of a fusion protein. To investigate whether expression of such a rlf/L-myc fusion protein could contribute to the development of SCLC we constructed a chimeric minigene where the rlf first exon and the L-myc second and third exon are under the control of the rlf promoter thereby recapitulating the events of the rearrangement. Attempts to generate transgenic mice with this minigene showed that mouse embryos containing high copy numbers of the rlf/L-myc minigene fail to develop, suggesting that the expression of a rlf/L-myc fusion protein interferes with early differentiation processes. To investigate the nature of this potential embryonic lethality further, we transfected the rlf/L-myc construct stably into embryonic stem (ES) cells. Transfected ES lines that express the rlf/L-myc construct do not show a higher proliferation rate than the parental ES line but fail to properly develop embroid bodies. In addition, outgrowth and differentiation of cells from embroid bodies was severely impaired in ES cells expressing the rlf/L-myc construct when compared to normal ES cells, again suggesting an interference of rlf/L-myc expression with proper differentiation. Expression of a rlf/L-myc fusion may therefore be of critical importance in tumorigenesis by blocking differentiation and thereby allowing continued proliferation of cells and the aquisition of further mutations leading to a fully malignant tumor.

2/7/50 (Item 1 from file: 77)
DIALOG(R)File 77:Conference Papers Index

1397622
Supplier Accession Number: 82047622 V10N9
Antibody Staining of Embryonic Leech Muscle, Blast Cell Migration and Neuronal Pathway Formation
Stuart, D.K.; Thompson, I.; Weisblat, D.A.; Kramer, A.P.
Dep. Mol. Biol., Univ. California, Berkeley, CA 94720, USA
Society for Neuroscience 12th Annual Meeting 8245000 Minneapolis, MN 31 Oct-5 Nov 82
Society for Neuroscience
1982, Society for Neuroscience, 9650 Rockville Pike, Bethesda, MD 20814, USA, Abstracts volume available. Price: $10.00 Abstract No. 9.4
Languages: ENGLISH

2/7/51 (Item 1 from file: 185)
DIALOG(R)File 185:Zoological Record Online(R)

0743373 Vol 124 Sec 06B1 Cit 00635
DETERMINATION OF CLEAVAGE PATTERN IN EMBRYONIC BLAST CELLS OF THE LEECH.
SHANKLAND, H.
DEV BIOL 120(2) 1987: 494-498, ILLUSTR.
Taxonomic Categories:
* ANNELIDA
** HIRUDINEA
*** HELOBDELLA TRISERIALIS
?

2/7/1 (Item 1 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

12045690 BIOSIS Number: 98645690
Blood island formation in attached cultures of murine embryonic stem cells
Bautch V L; Stanford W L; Rapoport R; Russell S; Byrum R S; Futch T A
Dep. Biol., CB No. 3280, Univ. North Carolina Chapel Hill, Chapel Hill, NC 27599, USA
Developmental Dynamics 205 (1). 1996. 1-12.
Full Journal Title: Developmental Dynamics
ISSN: 1058-8388
Language: ENGLISH
Print Number: Biological Abstracts Vol. 101 Iss. 005 Ref. 061435
Differentiation of murine embryonic stem cells in suspension culture results in the formation of cystic embryoid bodies that develop blood islands. In this study pre-cystic embryoid bodies were attached to a substratum, and the program of differentiation was monitored. The attached ES cell cultures formed blood islands on a cell layer that migrated out from the center of attachment and beneath a mesothelial-like cell layer. Morphological and in situ marker analysis showed benzidine-positive hematopoietic cells surrounded by vascular endothelial cells that expressed PECAM and took up DiI-Ac-LDL. Waves of morphological differentiation were evident, suggesting a graded response to differentiation signals. Electron microscopy of the blood islands showed that they were similar to blood islands of cystic embryoid bodies and mouse yolk sacs, and cell-cell junctions were evident among the blood island cells. RNA expression analysis was consistent with the presence of hematopoietic precursor cells of several lineages and a primitive vascular endothelium in the cultures. Thus a program of vascular and hematopoietic development can be elaborated in attached ES cell cultures, and these blood islands are accessible to experimental manipulation.

2/7/2 (Item 2 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

12014894 BIOSIS Number: 98614894
In vitro differentiation of embryonic stem cells
Keller G M
Natl. Jewish Cent. Immunol. Respir. Med., 1400 Jackson St., 5GB, Denver, CO 80206, USA
Current Opinion in Cell Biology 7 (6). 1995. 862-869.

Full Journal Title: Current Opinion in Cell Biology
ISSN: 0955-0674
Language: ENGLISH
Print Number: Biological Abstracts/RRM Vol. 048 Iss. 002 Ref. 017803

2/7/4 (Item 4 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

11895810 BIOSIS Number: 98495810
M-twist expression inhibits mouse embryonic stem cell-derived myogenic differentiation in vitro
Rohwedel J; Horak V; Hebrok M; Fuechtbauer E-M; Wobus A M
Inst. Plant Genetic Crop Plant Res., Correnssstrasse 3, D-06466 Gatersleben, Germany
Experimental Cell Research 220 (1). 1995. 92-100.
Full Journal Title: Experimental Cell Research
ISSN: 0014-4827
Language: ENGLISH
Print Number: Biological Abstracts Vol. 100 Iss. 010 Ref. 146667
The mouse M-twist gene codes for a basic helix-loop-helix protein which was shown to be inhibitory for differentiation of myogenic cells in culture. Mouse embryonic stem (ES) cells of line BLC6 efficiently differentiating into skeletal muscle cells when cultivated as embryo-like aggregates (embryoid bodies) were stably transfected with the plasmid pME18s-twist containing the M-twist gene under the control of the modified SV40 early promoter SR-alpha. Two pME18s-twist-expressing clones showed delayed and reduced skeletal muscle cell differentiation depending on the level of exogenous M-twist expression compared to control cells. By morphological analysis using phase contrast microscopy and hematoxylin-eosin staining, the development of first myocytes and formation of myotubes in embryoid body outgrowths of these clones were found to be delayed for about 3 days in comparison to control cells. Immunofluorescence studies with a monoclonal antibody against sarcomeric myosin heavy chain revealed that myogenic cells appeared in so-called myogenic centers showing a reduced number of myocytes and myotubes in the M-twist-expressing clones. Using RT-PCR analysis the expression of the skeletal muscle determination genes myt5, myogenin, and MyoD as well as muscle-specific genes coding for the gamma-subunit of the nicotinic acetylcholine receptor and the cell adhesion molecule M-cadherin were found to appear with a delay of at least 1 to 4 days in the pME18s-twist-transfected cells during the development of embryoid bodies. We conclude that the constitutive expression of the mouse M-twist gene during EScell-derived differentiation has an inhibitory effect on skeletal muscle cell development depending on the level of exogenous M-twist expression.

2/7/13 (Item 13 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

11630210 BIOSIS Number: 98230210
Development of functional macrophages from embryonal stem cells in vitro
Lieschke G J; Dunn A R
Whitehead Inst. Biomed. Res., 9 Cambridge Center, Cambridge, MA 02142, USA
Experimental Hematology (Charlottesville) 23 (4). 1995. 328-334.
Full Journal Title: Experimental Hematology (Charlottesville)
ISSN: 0301-472X
Language: ENGLISH
Print Number: Biological Abstracts Vol. 099 Iss. 011 Ref. 152386
When cultured under appropriate in vitro conditions, embryonal stem cells (ESCS) form embryoid bodies (EBs) that contain mature hematopoietic cells, including cells of the monocyte-macrophage lineage. A two-step in vitro culture system for generation of ESC-derived macrophages has been developed and optimized. Maximum numbers of macrophage-containing colonies developed in secondary hematopoietic cultures of cells from disrupted EBs after 9 to 12 days of differentiation when interleukin-3 (IL-3) and macrophage colony-stimulating factor (M-CSF) were included in both primary and secondary cultures. Over 10-5 viable, phagocytically active macrophages were generated from cultures initiated by 7500 ESCs. The inclusion of stem cell factor (SCF) in primary cultures not only increased the frequency of progenitor cells but also the cellular heterogeneity of colonies. SCF in secondary cultures increased the cellularity, but not the frequency, of macrophage-containing colonies; although cellular heterogeneity was also increased, there was still an overall increase in yield of macrophages.

2/7/18 (Item 18 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

11461184 BIOSIS Number: 98061184
Hemopoietic development of embryonic stem cells in vitro: Induction of lymphoid progenitors
Potocnik A J; Nielson P; Eichmann K
Max-Planck-Inst. Immunobiologie, Freiburg, Germany
Immunobiology 191 (2-3). 1994. 87.
Full Journal Title: XXVth Meeting of the Society of Immunology, Konstanz, Germany, September 21-24, 1994. Immunobiology
ISSN: 0171-2985
Language: ENGLISH

Print Number: Biological Abstracts/RRM Vol. 047 Iss. 002 Ref. 022771

2/7/20 (Item 20 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

11446413 BIOSIS Number: 98046413
In vitro differentiation of embryonic stem cells into cardiomyocytes or skeletal muscle cells is specifically modulated by retinoic acid
Wobus A M; Rohwedel J; Maltsev V; Hescheler J
Inst. Pflanzengenetik Kulturpflanzenforschung, Correnssstrasse 3, D-06466 Gatersleben, Germany
Roux's Archives of Developmental Biology 204 (1). 1994. 36-45.
Full Journal Title: Roux's Archives of Developmental Biology
ISSN: 0930-035X
Language: ENGLISH
Print Number: Biological Abstracts Vol. 099 Iss. 003 Ref. 030957
Pluripotent embryonic stem cells (ES cells) differentiating via embryo-like aggregates (embryoid bodies) into derivatives of the primary germ layers were used as a model system to investigate the time- and concentration-dependent effects of retinoic acid (RA) on the in vitro differentiation pattern. When ES cells, cultivated normally under conditions resulting in cardiomyocyte differentiation, were treated during the first 2 days of embryoid body formation with high RA concentrations (10-9 to 10-7 M) a strong inhibition of cardiogenesis was found. ES cells differentiating as embryoid bodies and treated with the same RA concentration between the 5th and 7th day resulted in a slight induction of cardiogenesis. In contrast, incubation of embryoid bodies with 10-8 and 10-7 M RA between the 2nd and 5th day of embryoid body development resulted in a total inhibition of cardiogenesis but in an induction of myogenesis. This was demonstrated by indirect immunofluorescence and, as shown by reverse transcription- polymerase chain reaction (RT-PCR), by the time- and concentration-dependent inhibition of transcription of cardiac-specific alpha- and beta-cardiac myosin heavy chain (MHC) genes, and the induction of transcription of skeletal muscle-specific myogenin. In addition, using the whole-cell patch-clamp technique, these skeletal myocytes were functionally characterized by the expression of tissue-specific Ca-2+ channels and nicotinic cholinoceptors. In summary, a specific effect of RA on ES cell differentiation in the embryoid body resulting in a switch from cardiogenesis to myogenesis and an induction of neuronal cells was found.

2/7/22 (Item 22 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

11281575 BIOSIS Number: 97481575
Hematopoietic commitment of embryonic stem (ES) cells in culture
Keller G; Kennedy M; Carlsson L
National Jewish Center Immunol. Respiratory Med., Denver, CO, USA
Experimental Hematology (Charlottesville) 22 (8). 1994. 773.
Full Journal Title: 23rd Annual Meeting of the International Society for Experimental Hematology, Minneapolis, Minnesota, USA, August 21-25, 1994.
Experimental Hematology (Charlottesville)
ISSN: 0301-472X
Language: ENGLISH
Print Number: Biological Abstracts/RRM Vol. 046 Iss. 011 Ref. 179438

2/7/23 (Item 23 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

11258151 BIOSIS Number: 97458151
Generation of lymphohematopoietic cells from embryonic stem cells in culture
Nakano T; Kodama H; Honjo T
Dep. Med. Chem., Fac. Med., Kyoto Univ. Yoshida, Sakyo-ku, Kyoto 606, JAP
Science (Washington D C) 265 (5175). 1994. 1098-1101.
Full Journal Title: Science (Washington D C)
ISSN: 0036-8075
Language: ENGLISH
Print Number: Biological Abstracts Vol. 098 Iss. 009 Ref. 112463
An efficient system was developed that induced the differentiation of embryonic stem (ES) cells into blood cells of erythroid, myeloid, and B cell lineages by coculture with the stromal cell line OP9. This cell line does not express functional macrophage colony-stimulating factor (M-CSF). The presence of M-CSF had inhibitory effects on the differentiation of ES cells to blood cells other than macrophages. Embryoid body formation or addition of exogenous growth factors was not required, and differentiation was highly reproducible even after the selection of ES cells with the antibiotic G418. Combined with the ability to genetically manipulate ES cells, this system will facilitate the study of molecular mechanisms involved in development and differentiation of hematopoietic cells.

2/7/25 (Item 25 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

11080985 BIOSIS Number: 97280985
Embryonic stem cells differentiate in vitro into cardiomyocytes

representing sinus nodal, atrial and ventricular cell types
Maltsev V A; Rohwedel J; Hescheler J; Wobus A M
Inst. Pflanzengenetik Kulturpflanzefnorschung, Correnssstr. 3, D-06466 Getersleben, GER
Mechanisms of Development 44 (1). 1993. 41-50.
Full Journal Title: Mechanisms of Development
ISSN: 0925-4773
Language: ENGLISH
Print Number: Biological Abstracts Vol. 098 Iss. 001 Ref. 002630

Pluripotent embryonic stem cells (ESC, ES cells) of line D3 were differentiated in vitro via embryo-like aggregates (embryoid bodies) of defined cell number into spontaneously beating cardiomyocytes. By using RT-PCR technique, alpha- and beta-cardiac myosin heavy chain (MHC) genes were found to be expressed in embryoid bodies of early to terminal differentiation stages. The exclusive expression of the beta-cardiac MHC gene detected in very early differentiated embryoid bodies proved to be dependent on the number of ES cells developing in the embryoid body. Cardiomyocytes enzymatically isolated from embryoid body outgrowths at different stages of development were further characterized by immunocytological and electrophysiological techniques. All cardiomyocytes appeared to be positive in immunofluorescence assays with monoclonal antibodies against cardiac-specific alpha-cardiac MHC, as well as muscle-specific sarcomeric myosin heavy chain and desmin. The patch-clamp technique allowed a more detailed characterization of the in vitro differentiated cardiomyocytes which were found to represent phenotypes corresponding to sinusnode, atrium or ventricle of the heart. The cardiac cells of early differentiated stage expressed pacemaker-like action potentials similar to those described for embryonic cardiomyocytes. The action potentials of terminally differentiated cells revealed shapes, pharmacological characteristics and hormonal regulation inherent to adult sinusnodal, atrial or ventricular cells. In cardiomyocytes of intermediate differentiation state, action potentials of very long duration (0.3-1 s) were found, which may represent developmentally controlled transitions between different types of action potentials. Therefore, the presented ES cell differentiation system permits the investigation of commitment and differentiation of embryonic cells into the cardiomyogenic lineage in vitro.

2/7/30 (Item 30 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

10533961 BIOSIS Number: 96133961
EMBRYONIC STEM CELLS DERIVED FROM MORULAE INNER CELL MASS AND BLASTOCYSTS

OF MINK COMPARISONS OF THEIR PLURIPOTENCIES
SUKOYAN M A; VATOLIN S Y; GOLUBITSA A N; ZHELEZOVA A I; SEMENOVA L A;
SEROV O L
LAB. DEV. GENETICS, INST. CYTOL. AND GENETICS, ACAD. SCI. RUSS., SIBERIAN
DEP., 630090 NOVOSIBIRSK-90, RUSS.
MOL REPROD DEV 36 (2). 1993. 148-158. CODEN: MREDE
Language: ENGLISH
A characterization of cell lines that we derived from morulae (three lines), blastocysts (two lines), and the inner cell mass (ICM) is given. The karyotype of all the lines was normal; the genotype of four lines was XX, and four lines were genotypically XY. The pluripotencies and commitment status of the derived lines were estimated. First, there were not less than two-thirds of cells in the populations of the lines derived from morulae and the ICM with both Xs active; 70-100% of cells of the blastocyst-derived lines had one of the Xs in an inactive state. The activity of glucose-6-phosphate dehydrogenase (G6PD) in the lines (genotype XX) derived from morulae and ICM was found to be twofold higher than in lines with genotype XY, and G6PD activity was the same in the blastocyst-derived XX lines and XY lines. Second, when injected intraperitoneally into athymic mice, morulae- and ICM-derived cells gave rise to simple and complex embryoid bodies (EB) resembling to typical "cystic" mouse EBs. Third, when injected subcutaneously to athymic mice, the ICM- or morula-derived cells gave rise to typical teratomas containing derivatives of the three germ layers and components of organogenesis. Comparisons of cell lines of different derivations demonstrated that the pluripotencies of the ES cells derived from morulae or the ICM are higher than those of blastocyst derivation.

2/7/32 (Item 32 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

10451078 BIOSIS Number: 96051078
HEMATOPOIETIC GROWTH FACTOR RECEPTOR GENES AS MARKERS OF LINEAGE
COMMITMENT DURING IN-VITRO DEVELOPMENT OF HEMATOPOIETIC CELLS
MCCLANAHAN T; DALRYMPLE S; BARKETT M; LEE F
DNAX RESEARCH INST., 901 CALIFORNIA AVE., PALO ALTO, CA 94304-1104, USA.
BLOOD 81 (11). 1993. 2903-2915. CODEN: BLOOA
Full Journal Title: Blood
Language: ENGLISH
We have used two in vitro models to identify genes whose expression may

serve as markers of lineage commitment during the development of hematopoietic stem cells. One system involves the development in vitro of blastocyst-derived embryonic stem cells into embryoid bodies. The second involves culturing of day 3.5 blastocysts in vitro under conditions that support their development into yolk sac-like cysts. In both cases, hematopoietic cells arise in a manner that closely mimics the normal process occurring in the yolk sac of the early mouse embryo. We have focused our analysis on the expression of mRNAs for 15 hematopoietic growth factor receptor genes and other genes expressed in a hematopoietic lineage-specific manner. Although some growth factor receptor genes are apparently expressed constitutively during in vitro development, there are several classes of genes that undergo a highly consistent pattern of induction in both model systems. Genes induced early include those encoding the shared .beta. subunits of the interleukin-3 (IL-3), IL-5, and granulocyte-macrophage colony-stimulating factor (GM-CSF) receptors; those induced at intermediate times include the c-fms, G-CSF receptor, and CD34 genes; and a gene induced late during in vitro development is the IL-7 receptor gene. The defined temporal order for the expression of these genes suggests that they may be useful as markers for multiple stages in the development of different hematopoietic cell lineages during embryogenesis.

2/7/39 (Item 39 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

7372288 BIOSIS Number: 89023307
ESTABLISHMENT OF THE MOUSE EMBRYONIC STEM CELL LINES FROM WHOLE
BLASTOCYSTS AND ISOLATED INNER CELL MASSES
TOKUNAGA T; TSUNODA Y
RES. CENT., NIPPON ZENYAKU CO., LTD. 1-1 ASAKAMATI, KORIYAMA 963-01, JPN.
JPN J ANIM REPROD 35 (3). 1989. 173-178. CODEN: KHZAD
Full Journal Title: Japanese Journal of Animal Reproduction
Language: JAPANESE
Six embryonic stem cell lines (7%, 6/85; TT-3, -12, -23, -B2, -B3, -B4) were established from 85 mouse blastocysts or isolated inner cell masses (ICMs). The embryos or ICMs were cultured on mitomycin C treated feeder layer of the primary embryonal fibroblast cells which were obtained from trypsinized 16-day old C57BL mouse fetuses. Colonies of these cell lines formed EC cell like morphology, compact islands of cells having unclear cell borders. In two of ES cell lines, TT-12 and TT-B4, karyotypes were analyzed. The both cell lines had normal karyotype of 40 chromosomes in 78% (39/50) of the metaphase plates. In order to determine the differentiation potential of the ES cells, TT-12 cells, the fastest growing cell line, were

cultured in suspension without a feeder layer. They spontaneously differentiated into the cystic embryoid bodies which contained variety of tissues including endoderm and ectoderm like cells, indicating pluripotency of the cells in vitro.

2/7/40 (Item 40 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

7160016 BIOSIS Number: 88082761
PLURIPOTENT EMBRYONAL STEM CELL LINES CAN BE ESTABLISHED FROM DISAGGREGATED MOUSE MORULAE
EISTETTER H R
GLAXO INST. MOL. BIOL., 46 ROUTE DES ACACIAS, 1211 GENEVA, SWITZ.
DEV GROWTH DIFFER 31 (3). 1989. 275-282. CODEN: DGDFA
Full Journal Title: Development Growth & Differentiation
Language: ENGLISH
Mouse pluripotent embryonal stem (ES) cell lines hitherto have been conventionally isolated from the 'inner cell mass' of mouse blastocysts. In this report, I describe a new and simplified method for establishing pluripotent cell lines from mouse morulae of the 16- to 20-cell stage, which were disaggregated by the use of EDTA. From 17 cell lines established in such a way, 7 were characterized with respect to their differentiation potential: (i) When injected into syngeneic mice, the cells gave rise to solid, fully differentiated teratomas representing derivatives of all three germ layers. (ii) When cultured in suspension in vitro, the cells were able to differentiate into complex organized 'embryoid bodies' analogous to mouse early postimplantation embryos. These results strongly imply that embryonal stem cell lines isolated from mouse morulae are highly homologous to conventionally isolated ES cells. In addition, my results indicate that murine pluripotent embryonal stem (ES) cell lines can be derived with more ease and higher efficiency from disaggregated morulae than from the 'inner cell mass' of blastocysts.

2/7/48 (Item 48 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4519059 BIOSIS Number: 78092882
EMBRYOID BODIES CULTURED IN IN-VIVO DIFFUSION CHAMBERS SHOW REDUCED
TUMORIGENICITY WHILE RETAINING EXPRESSION OF F-9 ANTIGENS
NOMURA T; SATOH N; KAMEYAMA T
DEP. MOL. BIOL., CANCER RES. INST., KANAZAWA UNIV., TAKARAMACHI,

KANAZAWA
920, JPN.
EXP CELL RES 153 (2). 1984. 506-514. CODEN: ECREA
Full Journal Title: Experimental Cell Research
Language: ENGLISH
Embryoid bodies of the mouse teratocarcinoma OTT6050 were dissociated into single cells and cultured in diffusion chambers implanted into the peritoneal cavities of mice. The syngeneic host mice, into which the cells of embryoid bodies cultured in the diffusion chambers were injected, survived much longer than those which received the original cells of embryoid body. In the case of the F9 cells, obtained in the same culture conditions, only a slight decrease in tumorigenicity was observed. The F9 antigenic expression was observed on both F9 and embryoid body cells cultured in diffusion chambers. Judging from the determination of adult-type antigenic expressions, the differentiation of the cells in chamber was negligible. The tumorigenic activity of the embryoid body cells cultured in vivo in a diffusion chamber may be almost suppressed, but evidently they continue in an undifferentiated state.

2/7/51 (Item 51 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4163103 BIOSIS Number: 26015446
DEVELOPMENTAL GROWTH OF EMBRYOID BODY COMPARABLE TO NORMAL EMBRYO
DEVELOPMENT
OJIMA S; KAWASHIMA H; MATSUZAWA T
DEP. BIOL., OSAKA KYOIKU UNIV., OSAKA.
15TH ANNUAL MEETING OF THE JAPANESE SOCIETY OF DEVELOPMENTAL BIOLOGISTS,
TOKYO, MAY 27-29, 1982. DEV GROWTH DIFFER 24 (4). 1982. 397. CODEN: DGDFA
Language: ENGLISH

2/7/59 (Item 59 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3220328 BIOSIS Number: 21012731
DEVELOPMENTAL GROWTH OF EMBRYOID BODY FOR THE NORMAL MOUSE EMBRYO
TSUJI H; KITAMURA M; MATSUZAWA T
DEP. BIOL., OSAKA KYOIKU UNIV., OSAKA.

13TH ANNUAL MEETING OF THE JAPANESE SOCIETY OF DEVELOPMENTAL BIOLOGISTS,
JUNE 20-22, 1980. DEV GROWTH DIFFER 22 (4). 1980 (RECD. 1981). 714.
CODEN: DGDFA
Language: ENGLISH

2/7/67 (Item 67 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

2481716 BIOSIS Number: 66028621
THE PROCESS OF DIFFERENTIATION OF EMBRYOID BODIES IN THE LUNG OF SYNGENEIC MICE
ISHIKAWA T; HAGIWARA A
LAB. DEV. BIOL., DEP. ZOOL., FAC. SCI., KYOTO UNIV., KYOTO 606, JPN.
DEV GROWTH DIFFER 19 (4). 1977 (RECD 1978) 329-336. CODEN: DGDFA
Full Journal Title: Development Growth & Differentiation
Language: ENGLISH
Differentiation of embryoid bodies of mouse testicular teratocarcinoma OTT6050 transplanted into the lung of syngeneic mice (129/Sv) is described. Embryoid bodies took more than 2 wk to differentiate, and several kinds of differentiated tissues appeared often in the colonies derived from a single embryoid body. All colonies with differentiated tissues were larger than 100 .mu.m in diameter. Three steps in differentiation of embryoid bodies were distinguished by microscopic observations on histological preparations of tumors at different periods after injection. The 1st step is deformation of embryoid bodies and disappearance of the outer endodermal cells, which occurs within a few days after injection. In the 2nd step, which begins 5-7 days after injection, clusters of embryonal carcinoma cells in the colony are identified by the PAS [periodic acid schiff] reaction. The 3rd step starts about 10 days after injection and is characterized by formation of tubular structures in some clusters.

2/7/81 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05700052 86001052
[Development of 3 populations of embryonal bodies in monolayer culture and in suspension]
Evolution sur culture en monocouche et en suspension de trois populations de corps embryonnaires.
Costa-Llobet C; Gotzens-Garcia V; Andres X; Ruano-Gil D
Bull Assoc Anat (Nancy) (FRANCE) Sep 1984, 68 (202) p251-60, ISSN

0376-6160 Journal Code: BBA
Languages: FRENCH Summary Languages: ENGLISH
Document type: JOURNAL ARTICLE English Abstract

In the present investigation the "in vitro" behaviour of three morphologically different types of embryoid bodies of the teratocarcinoma OTT 6050, which were isolated by means of a Ficoll's density gradient, was analyzed. The study of the results obtained from the culture in suspension and in monolayer show that these morphologically different types represent three different stages of one evolutional cycle which tends to reproduce them as well as creating a variety of potentially more malign embryoid body.

2/7/82 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05612277 85228277

An embryonal carcinoma cell line as a model system to study developmentally regulated genes during myogenesis.

Dony C; Kessel M; Gruss P

Cell Differ (IRELAND) Dec 1984, 15 (2-4) p275-9, ISSN 0045-6039 Journal Code: CQ6
Languages: ENGLISH
Document type: JOURNAL ARTICLE

We have established conditions to efficiently differentiate embryonic carcinoma stem cells of the line P19 into myogenic cells. As inducers for differentiation, a combination of embryoid body formation in conjunction with treatment with dimethyl sulfoxide and retinoic acid proved to be most efficient. Under these conditions we detected an accumulation of myosin- and actin-specific RNA. Also, large amounts of type IV collagen RNA were produced. Type IV collagen is a component of the muscle basement membrane. In analogy to the F-9 system, we found a drastic decrease in stable p53 mRNA under the differentiation conditions used.

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